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Appendix

**Highly Enantioselective Reduction of Benzophenones
by Engineered *Geotrichum candidum* Alcohol Dehydrogenase**

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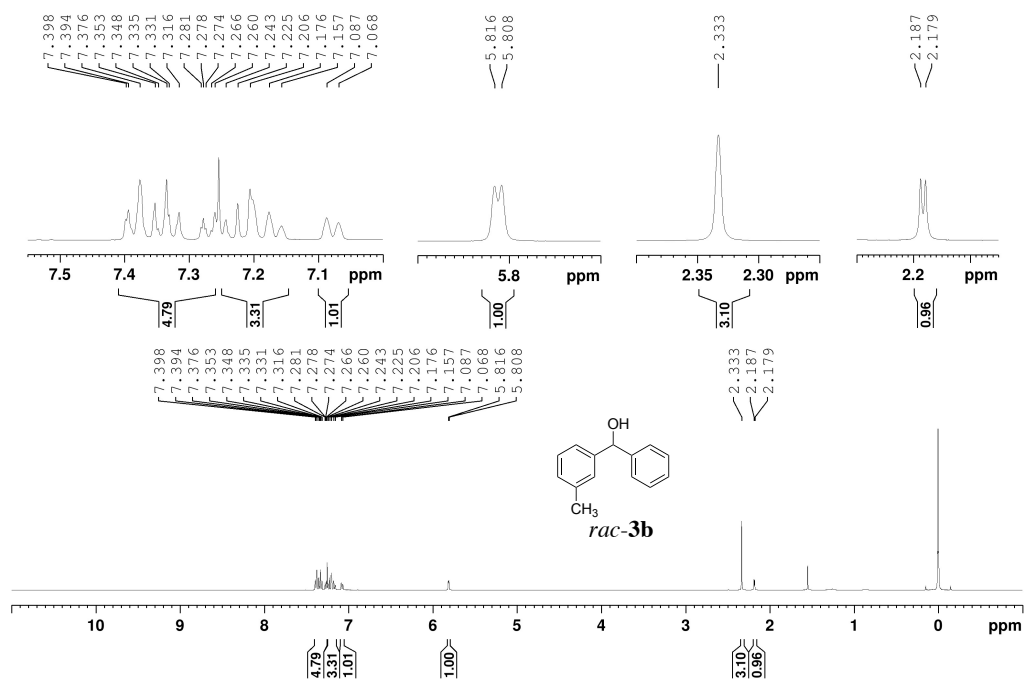
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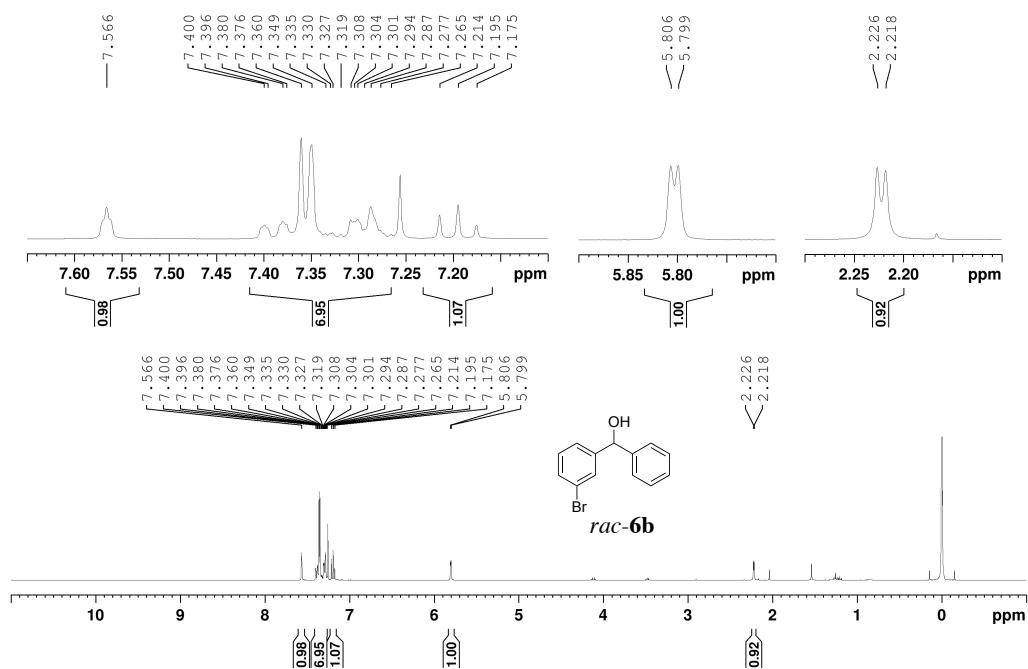
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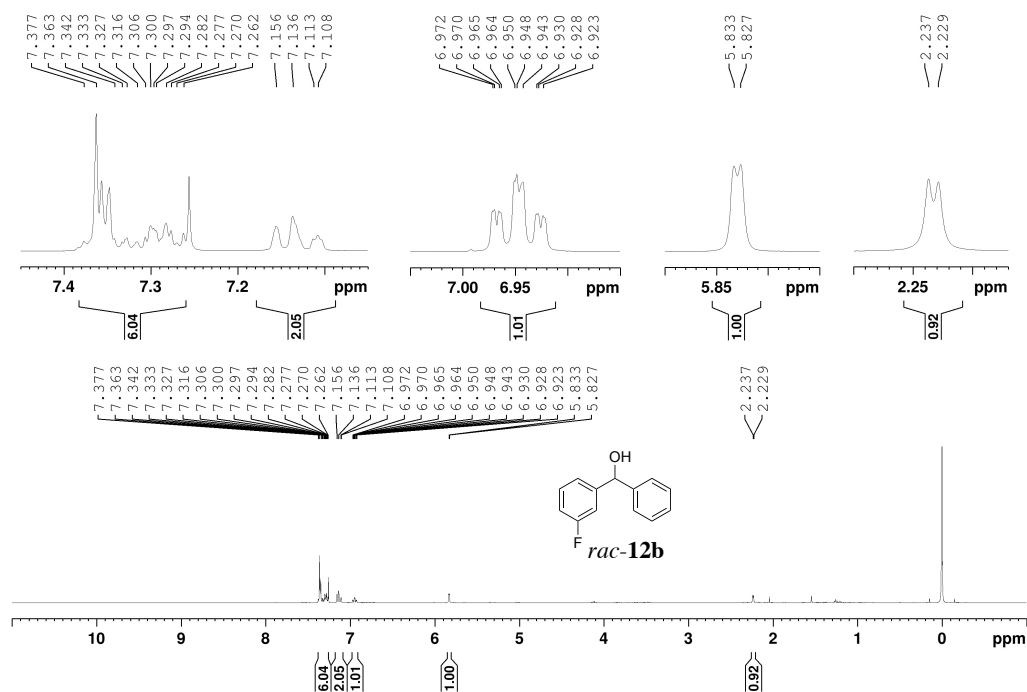
1. ^1H -NMR spectra of standard racemic alcohols, *rac*-3b, *rac*-6b, *rac*-12b, and *rac*-13b



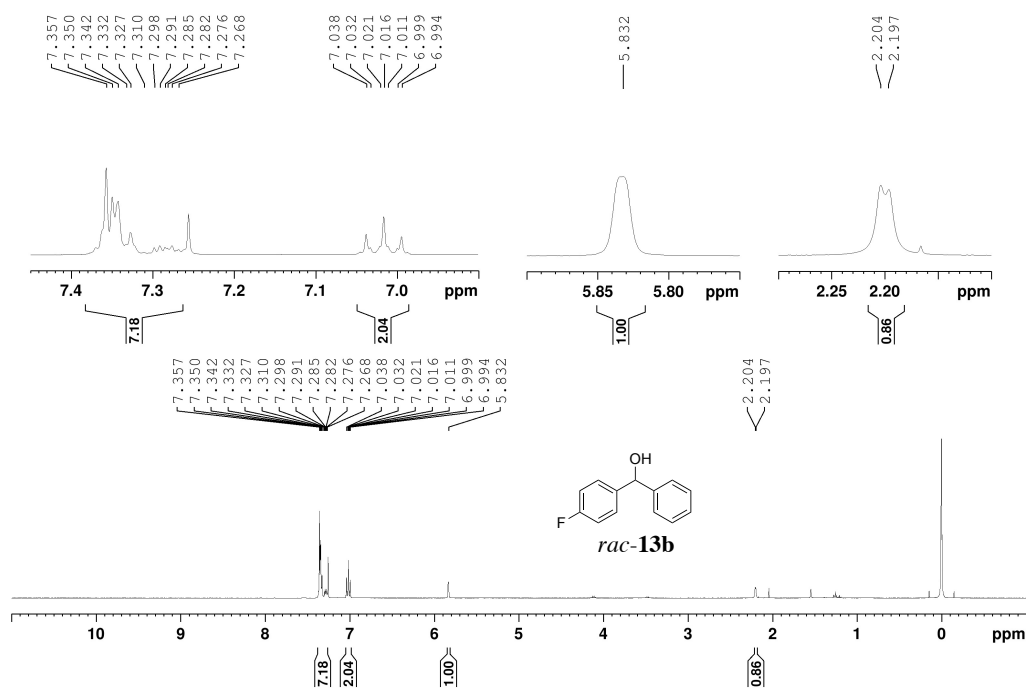
^1H -NMR spectrum of *rac*-3b



^1H -NMR spectrum of *rac*-6b

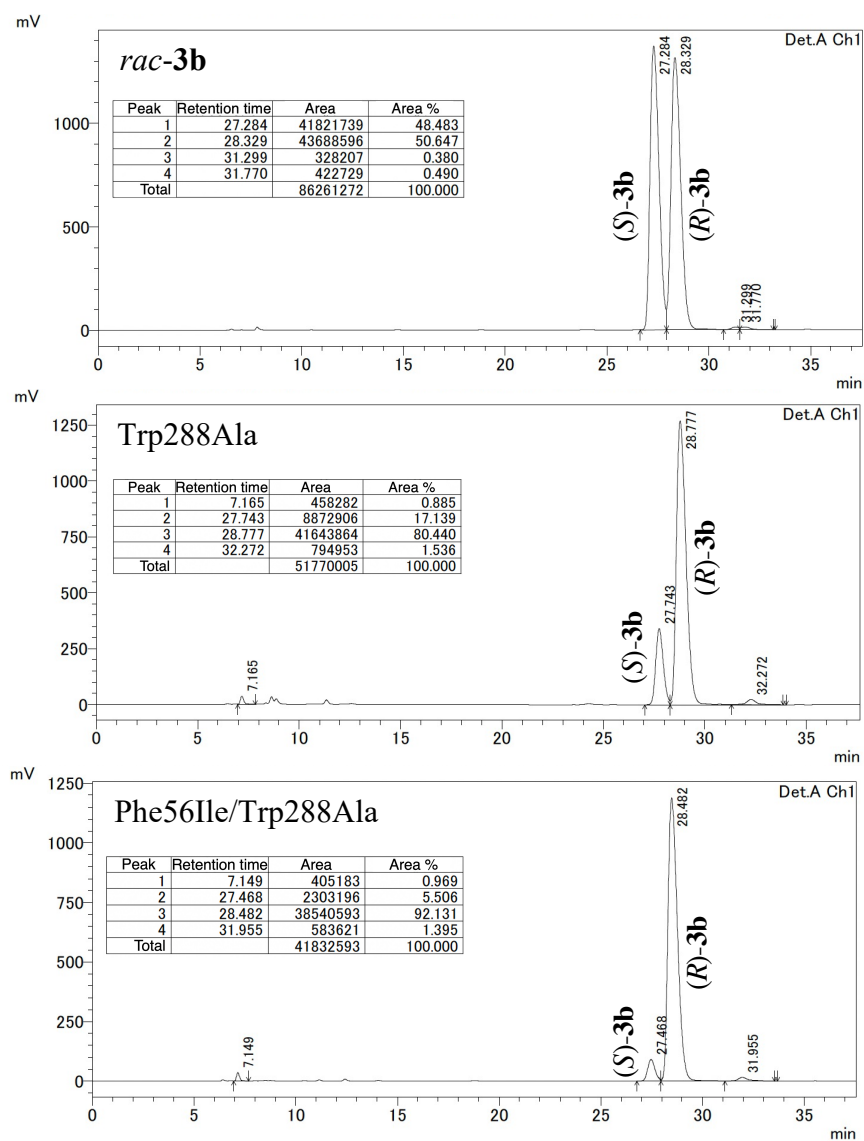


¹H-NMR spectrum of *rac-12b*

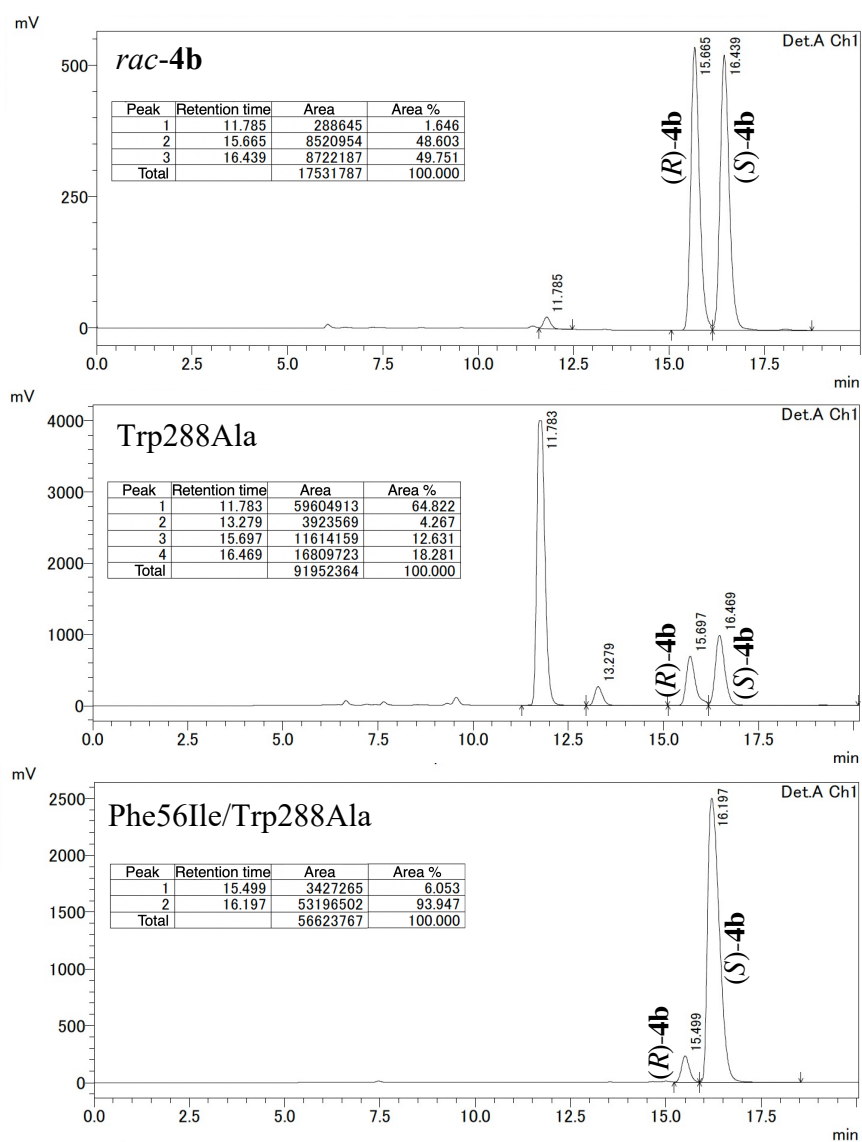


¹H-NMR spectrum of *rac-13b*

2. HPLC chromatograms of standard racemic alcohols and products from *GcAPRD* mutants-catalyzed reductions

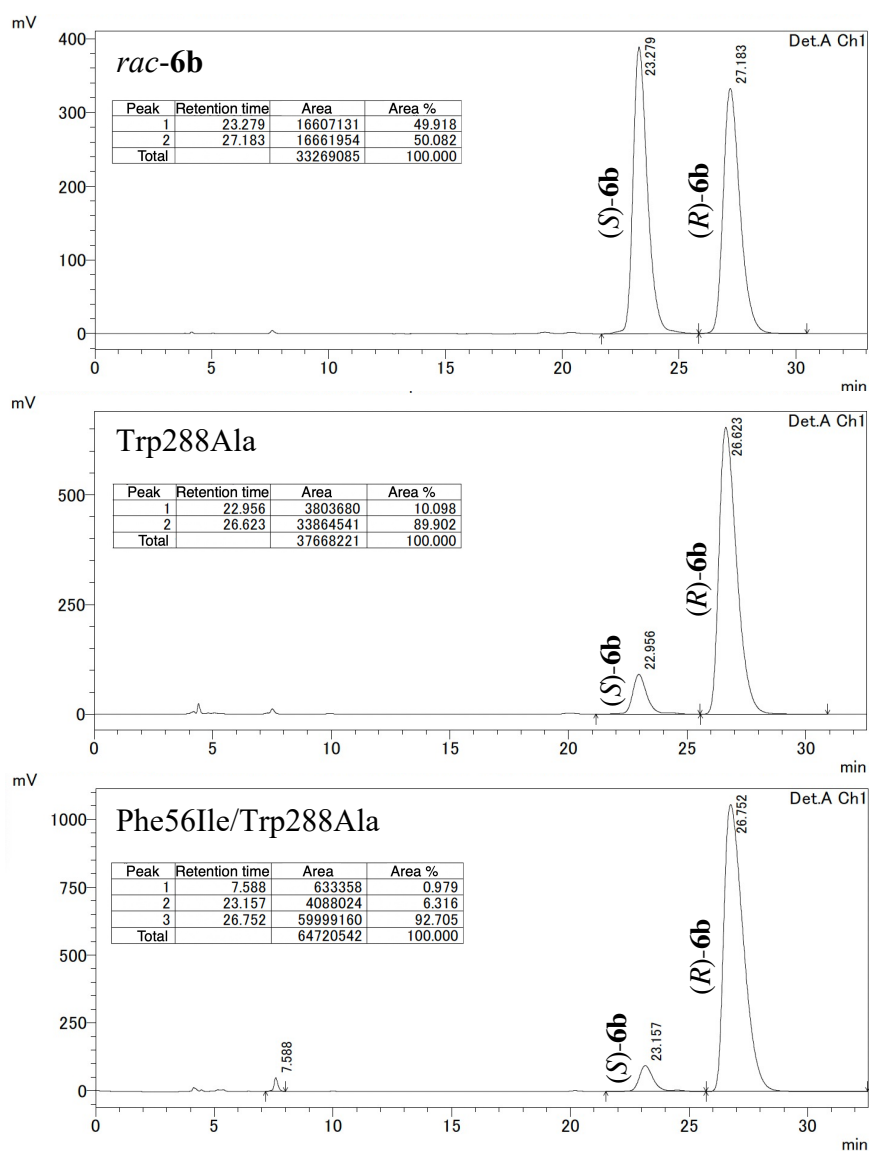


HPLC chromatograms of *rac*-3b and products from *GcAPRD* mutants-catalyzed reduction of 3a

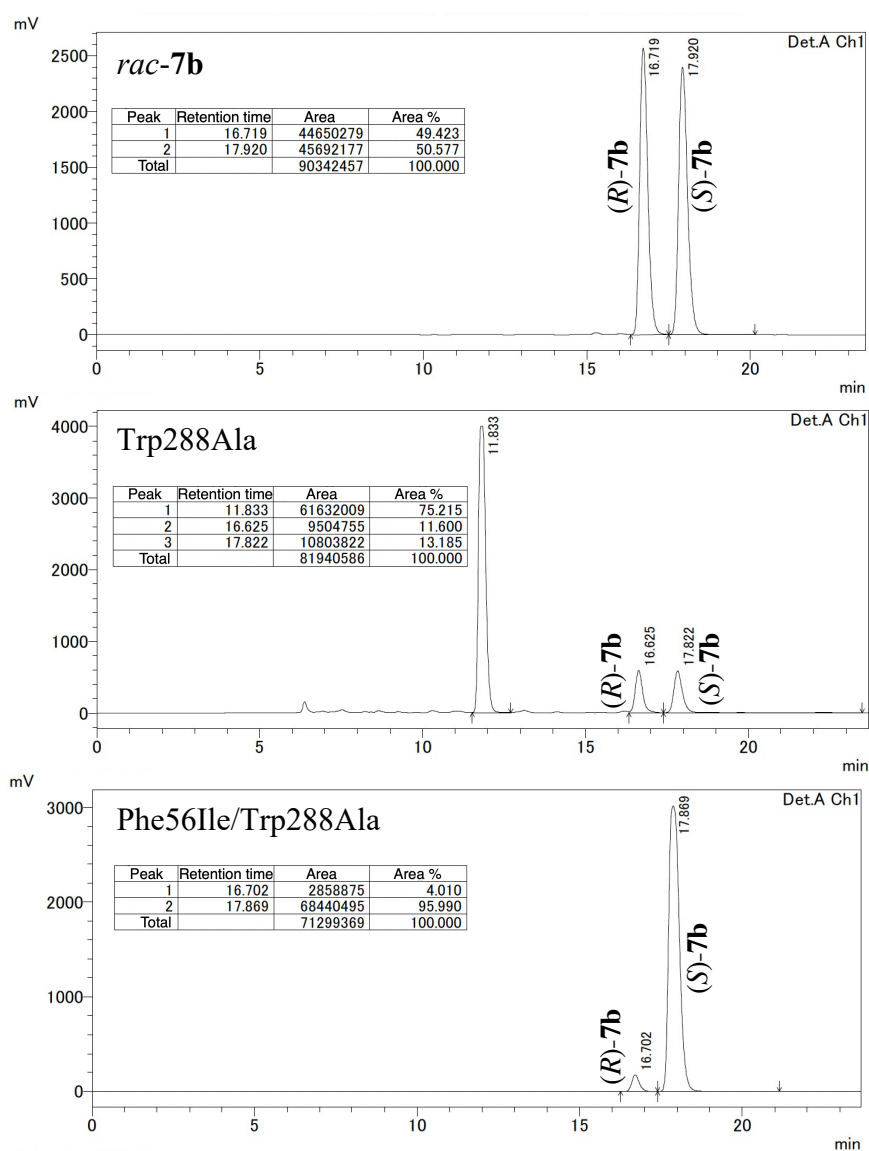


HPLC chromatograms of *rac*-**4b** and products from *GcAPRD* mutants-catalyzed reduction of **4a**

The sample of Trp288Ala was taken directly from the crude reaction mixture.

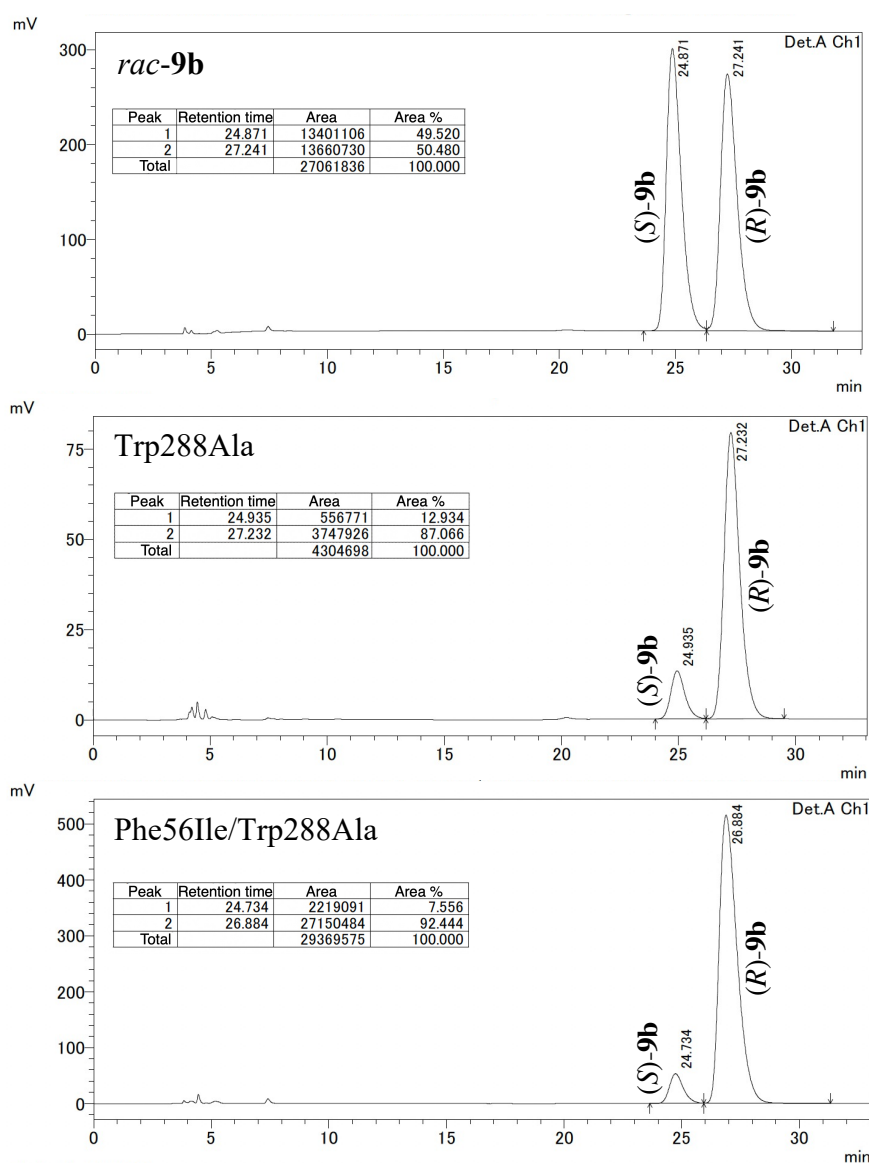


HPLC chromatograms of *rac*-6b and products from *GcAPRD* mutants-catalyzed reduction of 6a

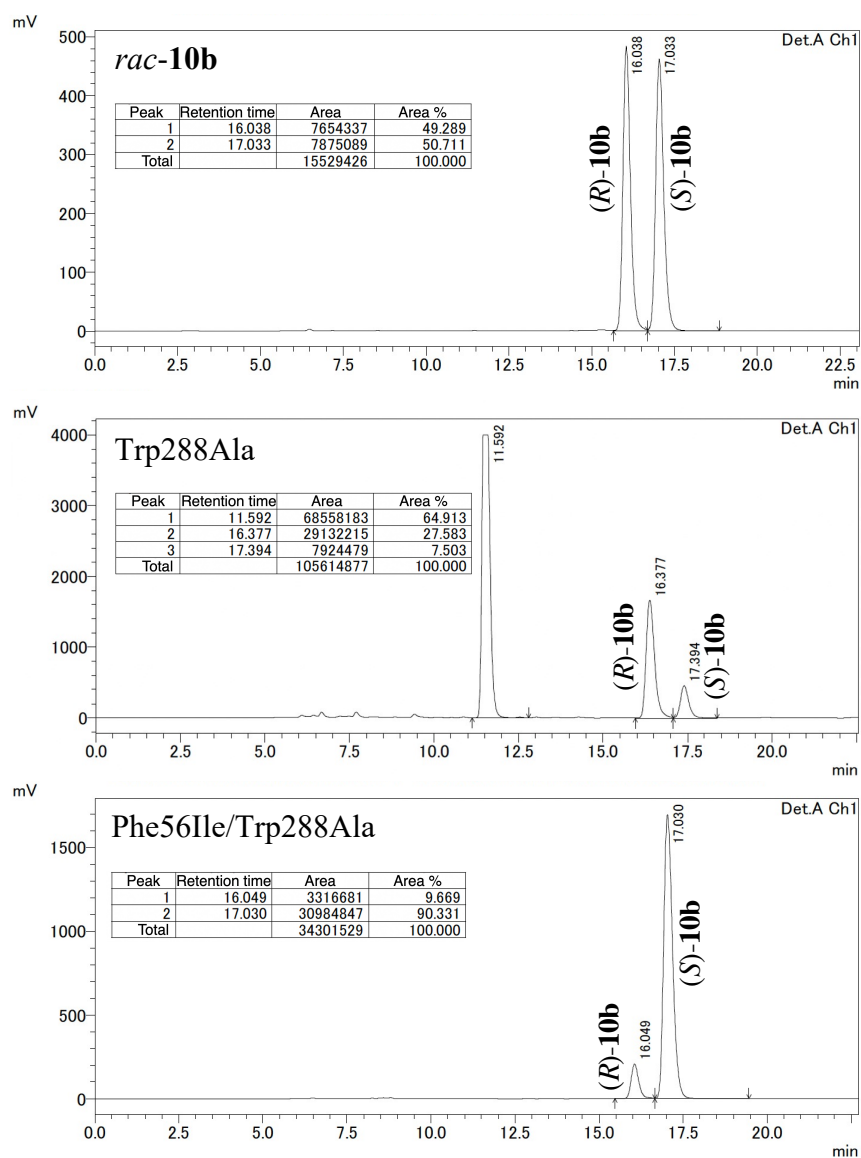


HPLC chromatograms of *rac*-**7b** and products from *GcAPRD* mutants-catalyzed reduction of **7a**

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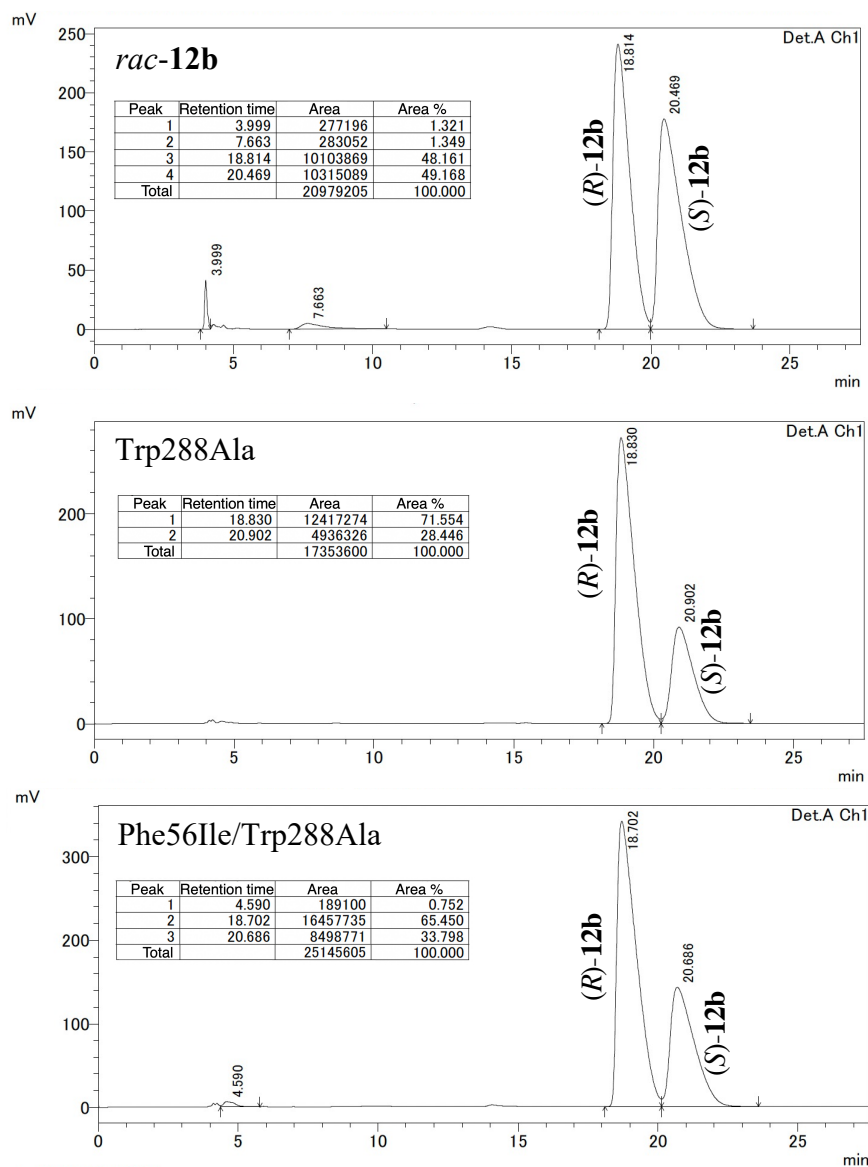


HPLC chromatograms of *rac*-9b and products from *GcAPRD* mutants-catalyzed reduction of 9a

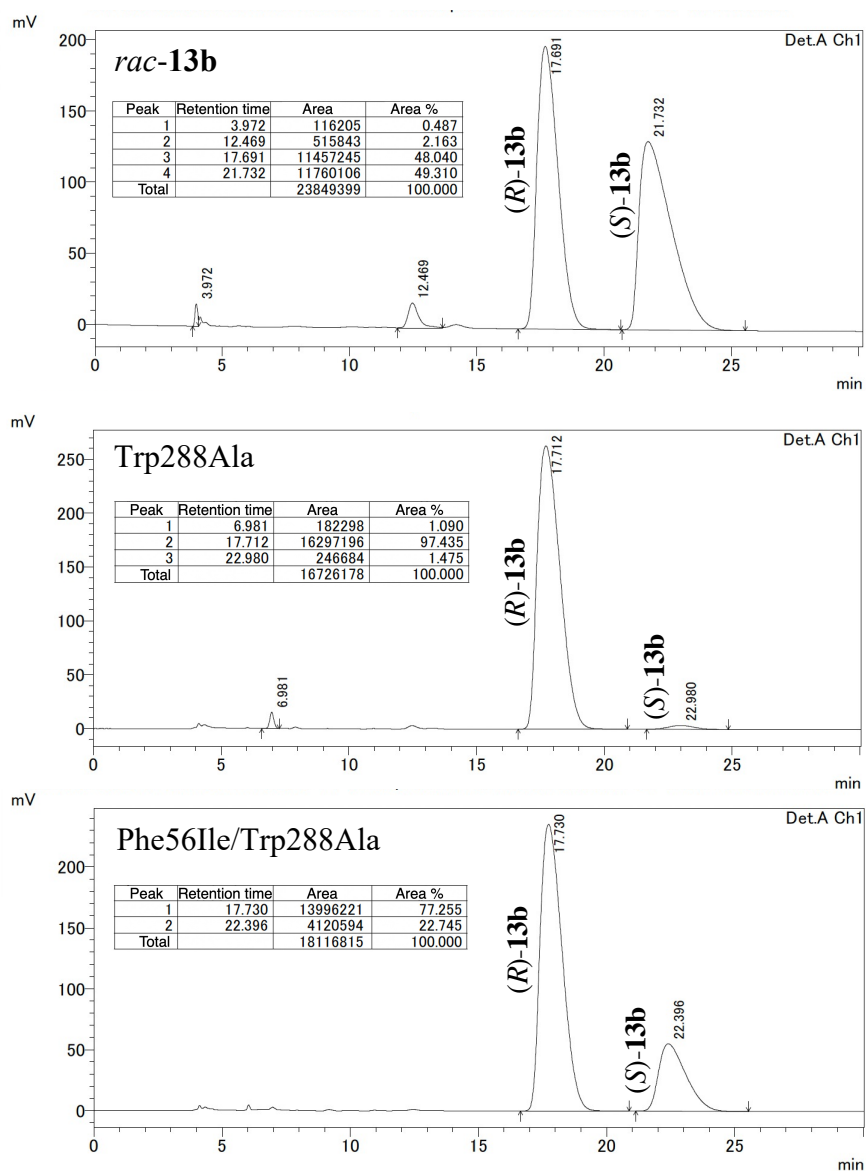


HPLC chromatograms of *rac*-**10b** and products from *GcAPRD* mutants-catalyzed reduction of **10a**

The sample of Trp288Ala was taken directly from the crude reaction mixture.

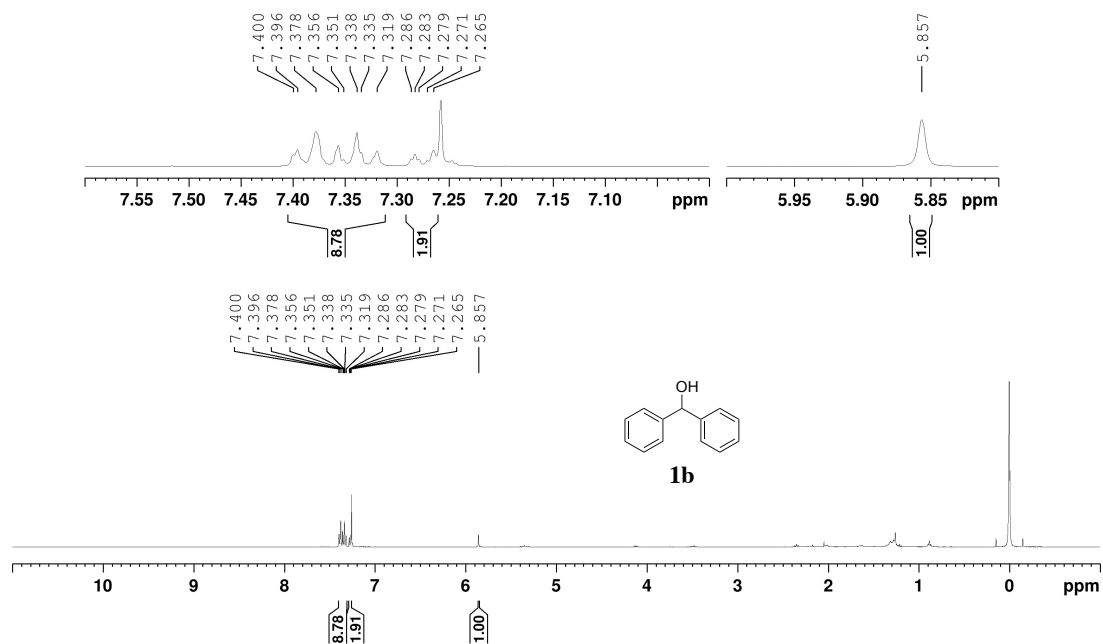


HPLC chromatograms of *rac*-12b and products from *GcAPRD* mutants-catalyzed reduction of 12a

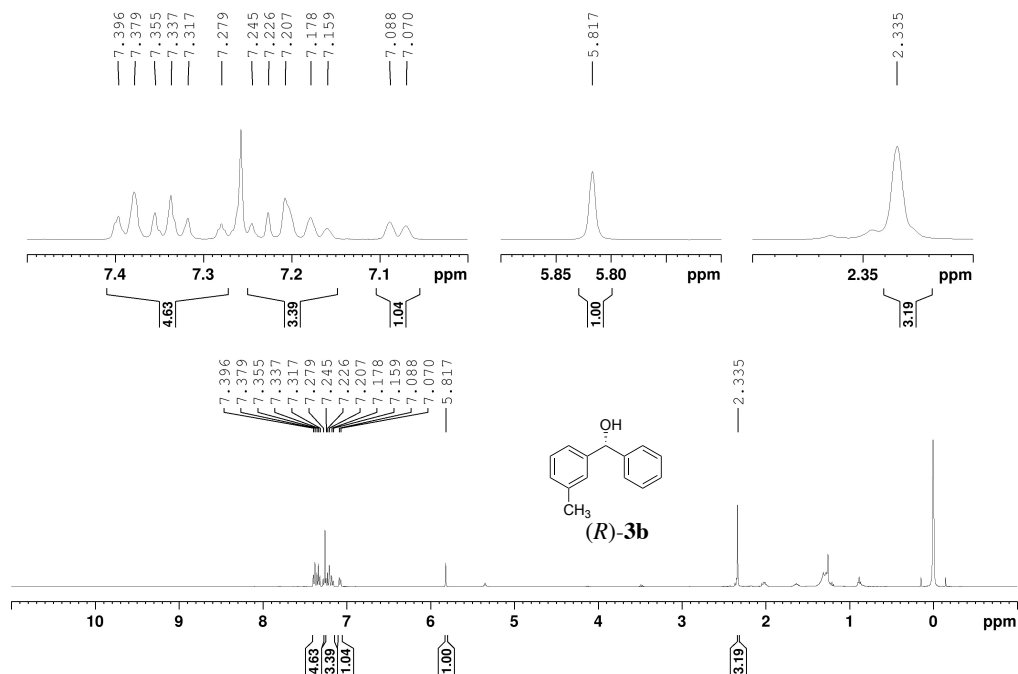


HPLC chromatograms of *rac*-**13b** and products from *GcAPRD* mutants-catalyzed reduction of **13a**

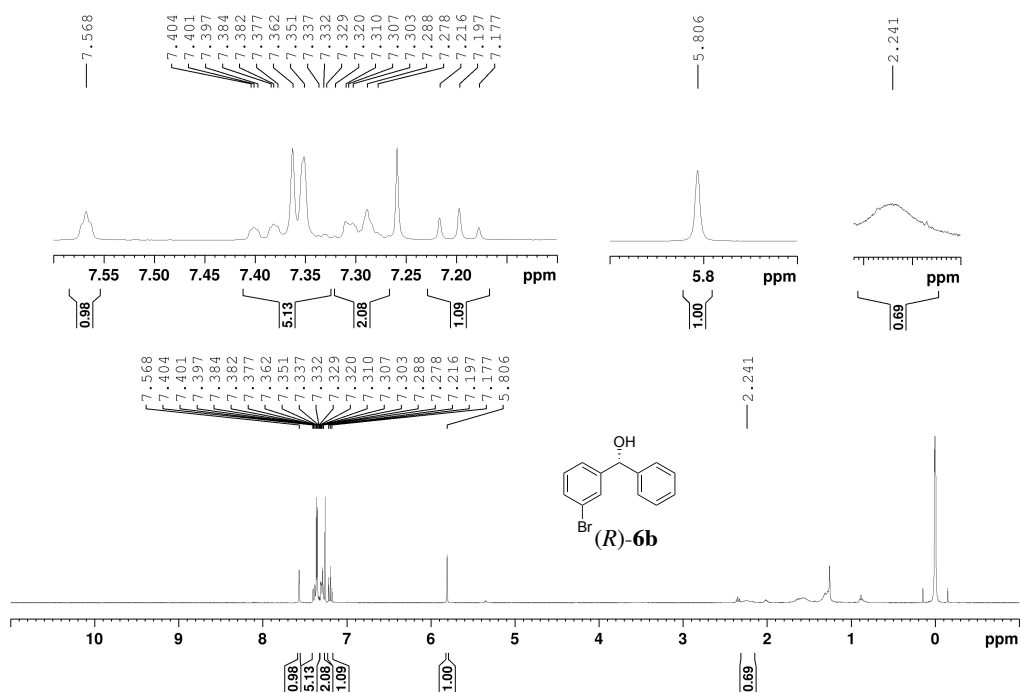
3. ^1H -NMR spectra of products from *GcAPRD* Trp288Ala-catalyzed reductions



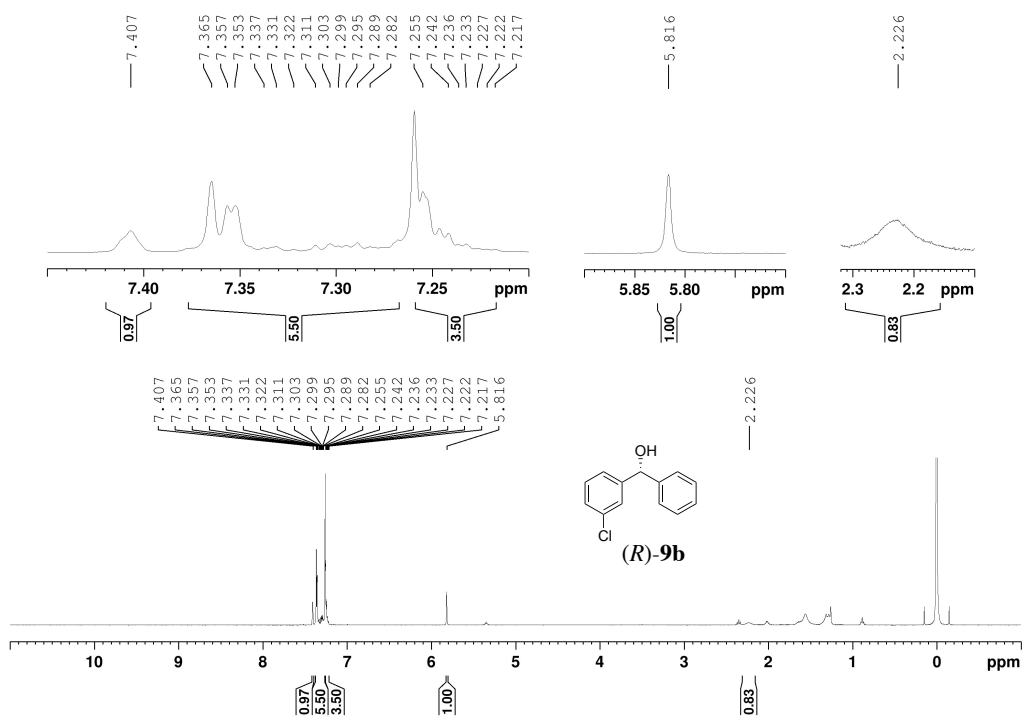
^1H -NMR spectrum of product from *GcAPRD* Trp288Ala-catalyzed reduction of **1a**



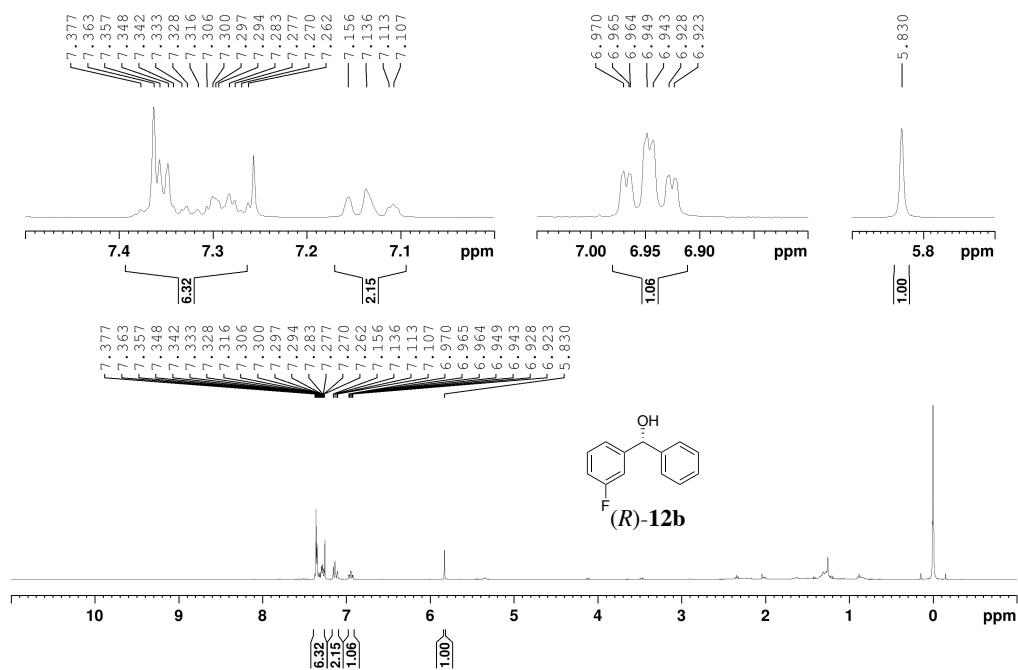
^1H -NMR spectrum of product from *GcAPRD* Trp288Ala-catalyzed reduction of **3a**



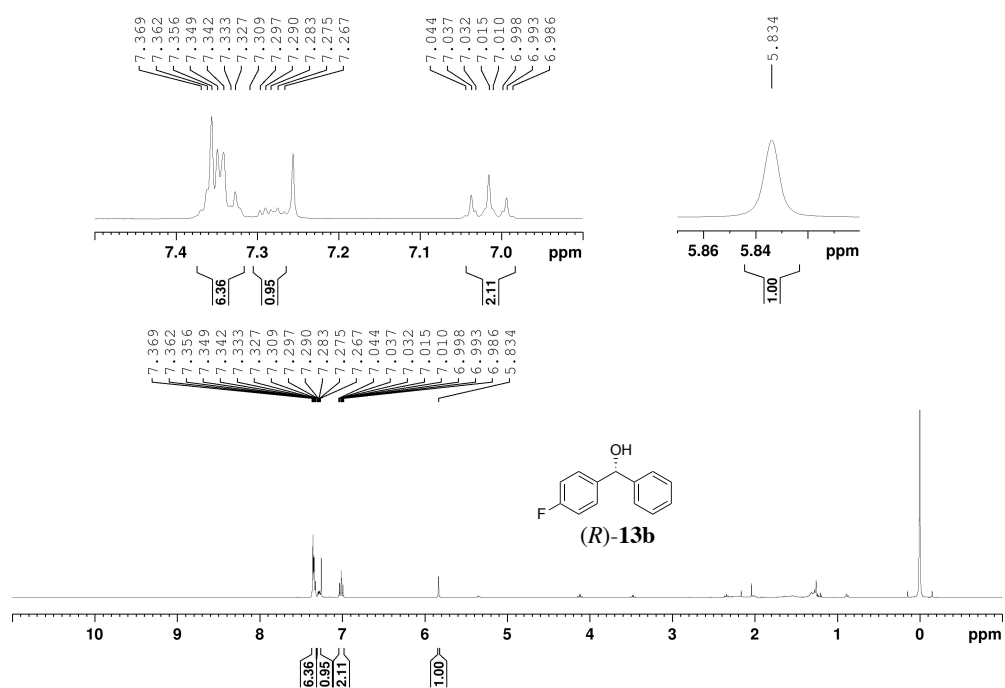
¹H-NMR spectrum of product from *Gc*APRD Trp288Ala-catalyzed reduction of **6a**



¹H-NMR spectrum of product from *Gc*APRD Trp288Ala-catalyzed reduction of **9a**

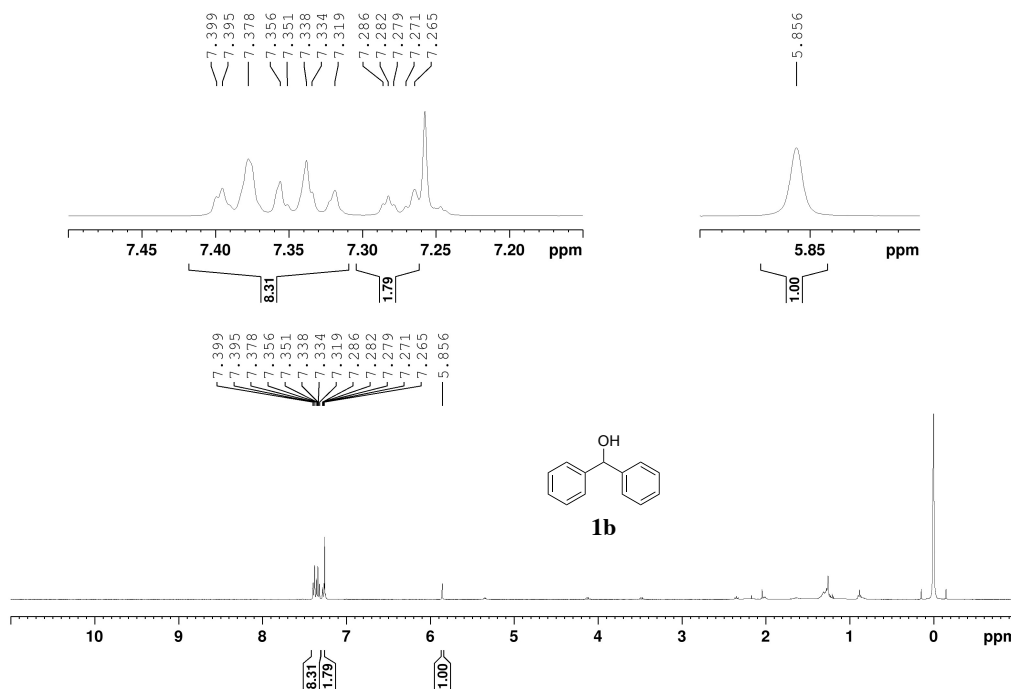


¹H-NMR spectrum of product from *GcAPRD* Trp288Ala-catalyzed reduction of **12a**

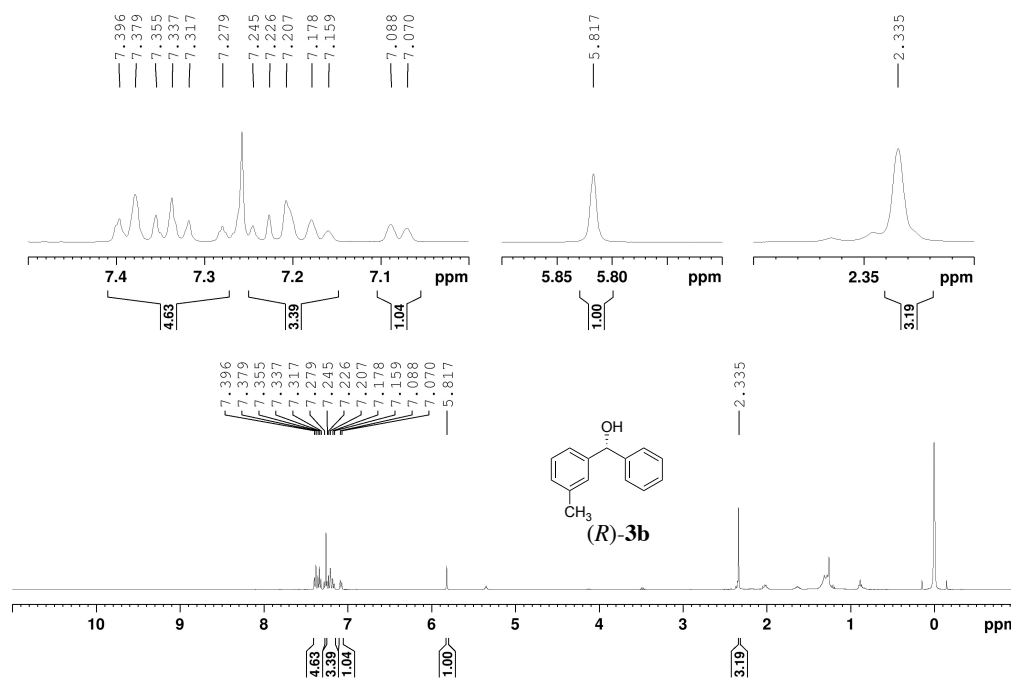


¹H-NMR spectrum of product from *GcAPRD* Trp288Ala-catalyzed reduction of **13a**

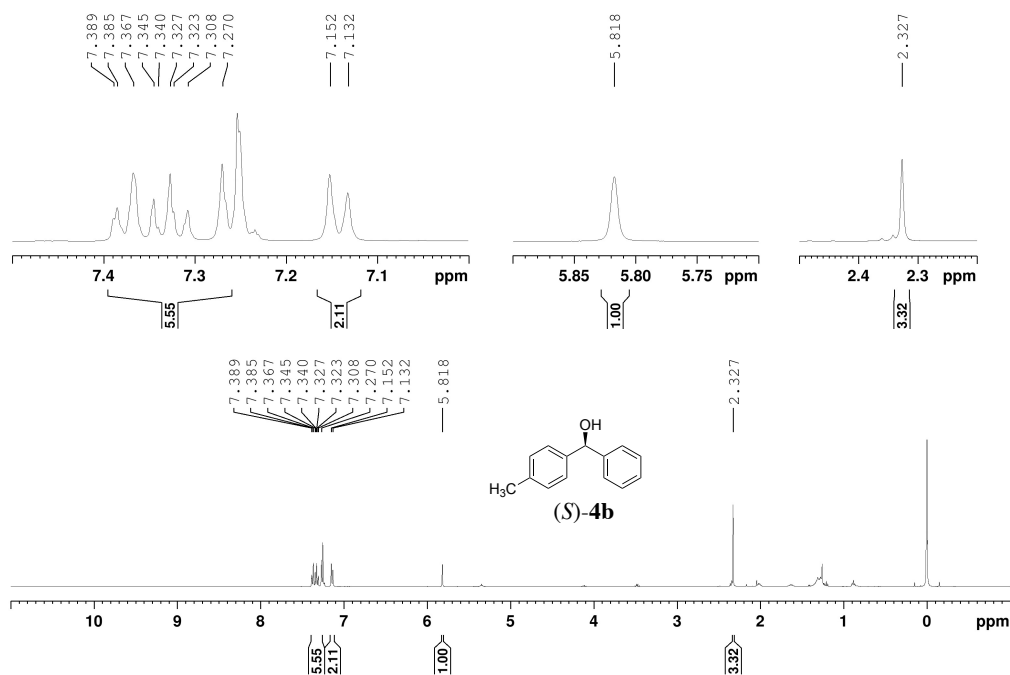
4. ^1H -NMR spectra of products from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reductions



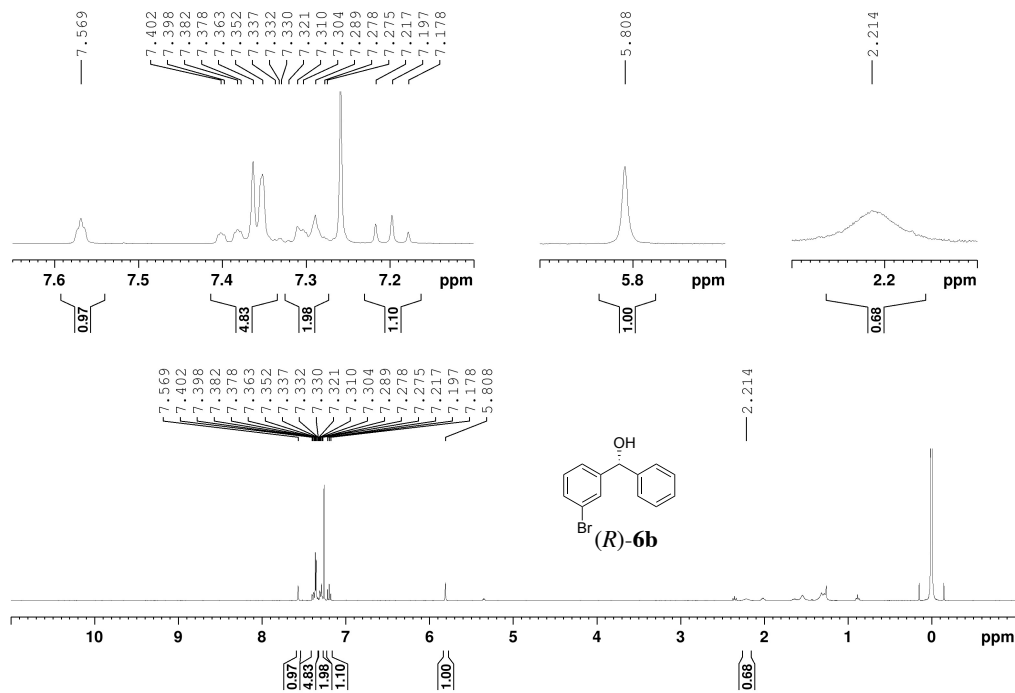
^1H -NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reduction of **1a**



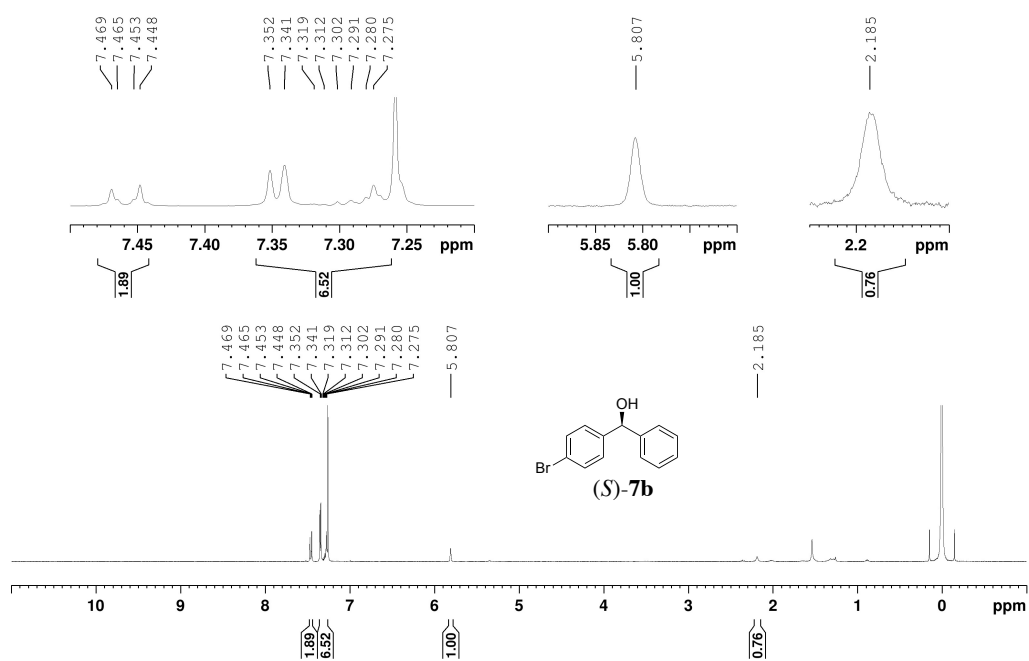
^1H -NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reduction of **3a**



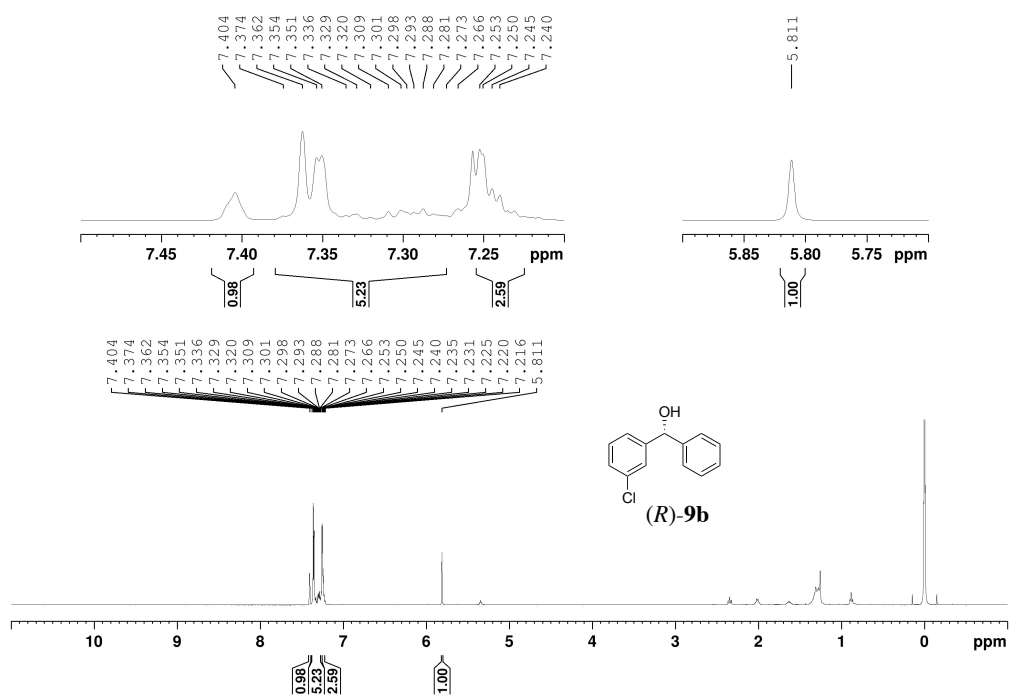
¹H-NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reduction of **4a**



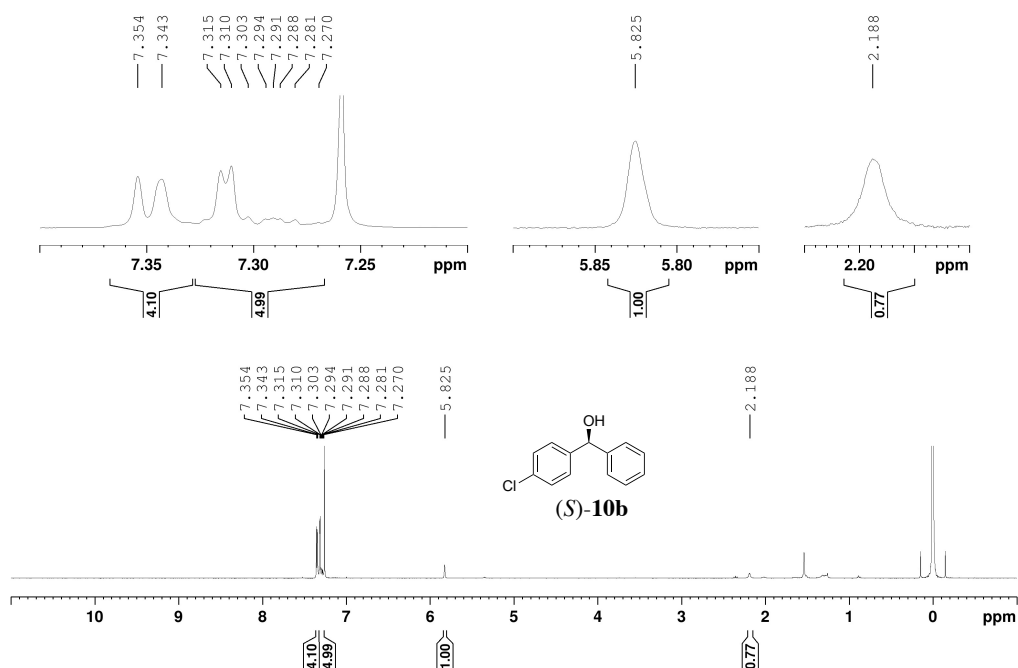
¹H-NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reduction of **6a**



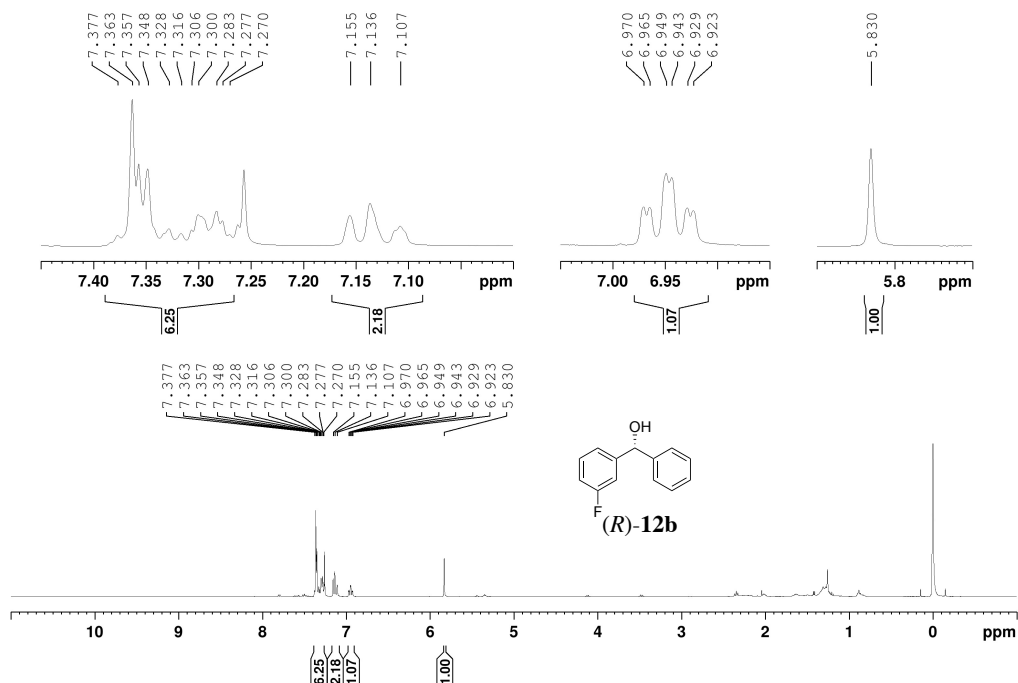
¹H-NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reduction of **7a**



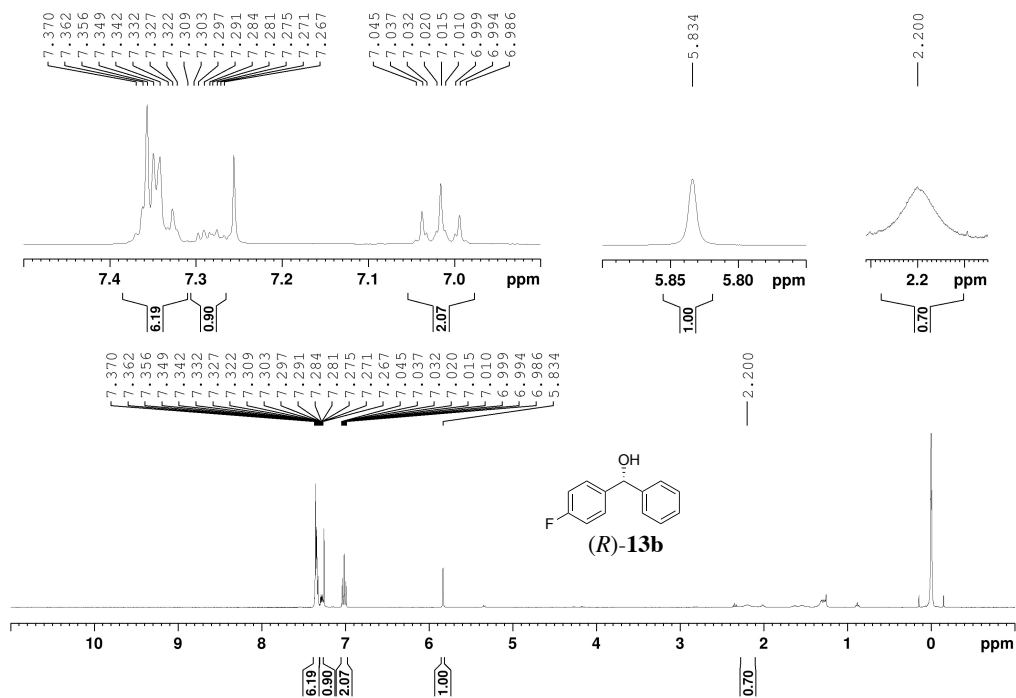
¹H-NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reduction of **9a**



¹H-NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reduction of **10a**

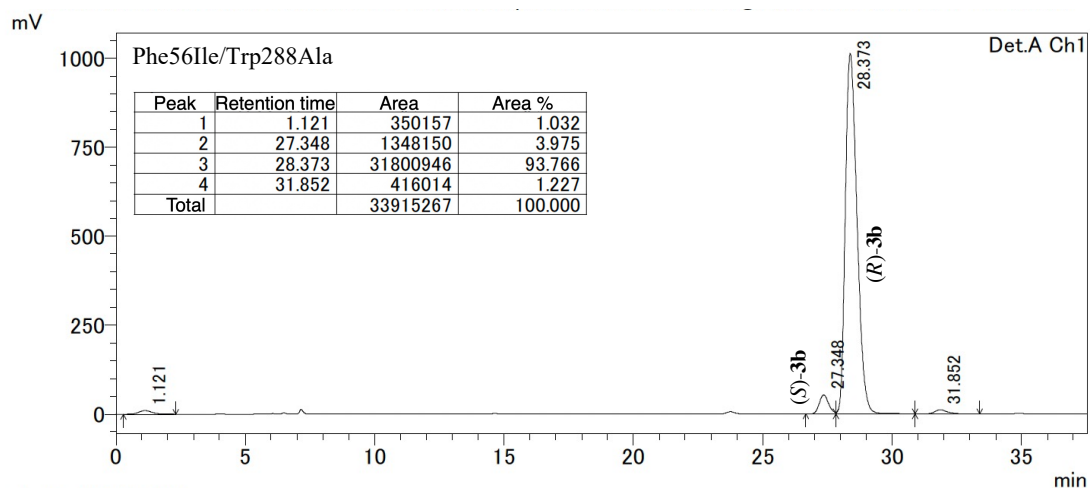


¹H-NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed reduction of **12a**

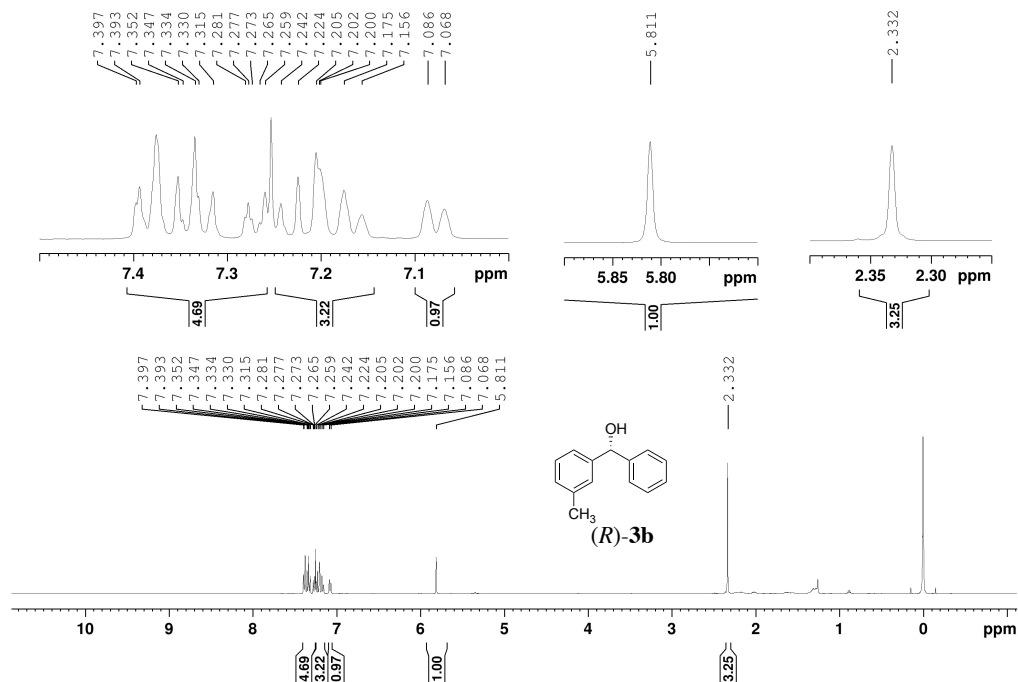


¹H-NMR spectrum of product from *Gc*APRD Phe56Ile/Trp288Ala-catalyzed reduction of **13a**

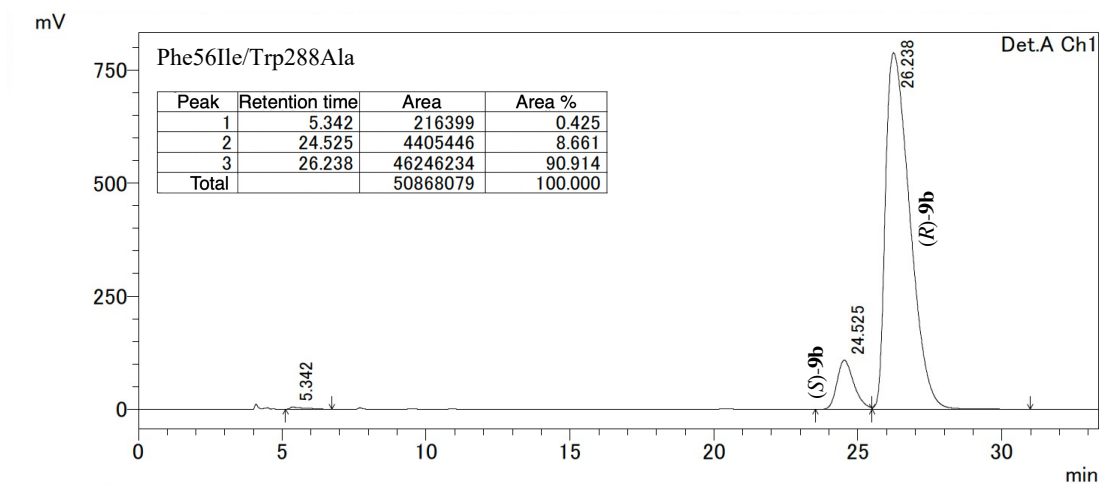
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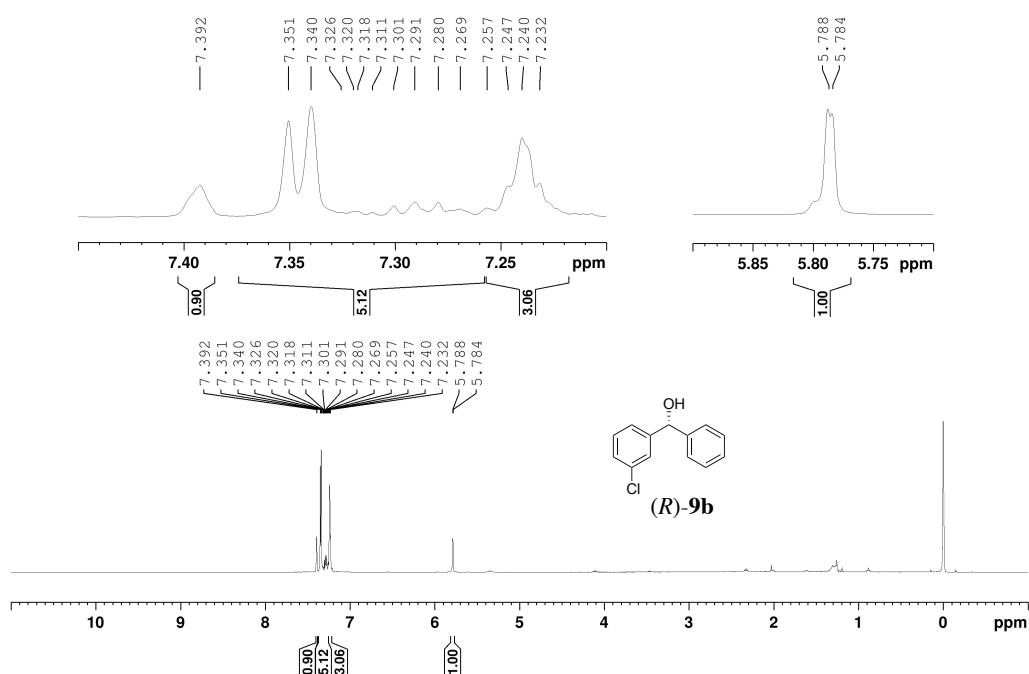
HPLC chromatogram of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed scaled-up reduction of **3a**



^1H -NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed scaled-up reduction of **3a**



HPLC chromatogram of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed scaled-up reduction of **9a**



^1H -NMR spectrum of product from *GcAPRD* Phe56Ile/Trp288Ala-catalyzed scaled-up reduction of **9a**